

METHODS AND DEVICES FOR ENHANCING BONDED SUBSTRATE YIELDS  
AND REGULATING TEMPERATURE

**ABSTRACT OF THE DISCLOSURE**

- 5                   Methods and devices that include the use of venting elements for  
enhancing bonded substrate yields and regulating temperature. Venting elements are  
generally fabricated proximal to functionalized regions in substrate surfaces to prevent  
bond voids that form during bonding processes from affecting the functionalized  
regions. Venting elements generally include venting channels or networks of channels  
10   and/or venting cavities.